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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,208	12/09/2003	James L. Hunter	P04419US01	4621

27142 7590 04/07/2006

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EXAMINER

MILLER, JONATHAN R

ART UNIT	PAPER NUMBER
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3653

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,208

Applicant(s)

HUNTER ET AL.

Examiner

Jonathan R. Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 28-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 –27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language of claim 1: “without reference to a container or a physical location in a coordinate system” is inaccurate and indefinite because Applicant’s invention does convey with reference to a container and a physical location in a coordinate system. The piping that conveys the seed in an airstream is a container as it contains the seed within a space. Furthermore, the seed is conveyed with reference to a physical location in a coordinate system. Applicant observes and measures the time taken for the movement of seed’s physical location through the system. The coordinate system is inherently present in any system where travel is measured between two locations. Additionally, the language of claim 1: “not by position of a conveying mechanism or container relative to a predetermined coordinate system, but by which of said one or more operations have been performed” is inaccurate and indefinite because Applicant’s invention does track by position of a conveying mechanism relative to a predetermined coordinate system. The conveying mechanism is the pneumatic fluid, and as stated above the coordinate system is inherently present in any system where travel is measured between two locations.
3. Claim 1 also has the language “the tracking comprises monitoring of one or more of the set consisting of the state of conveying, time and one or more operations relative to each set of

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seed (abstract). This language renders the claim indefinite because “consisting of” is a closed group and “one or more operations” is open.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-14, 17, 18, 20, 23 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Bhide et al. The reference discloses (a) providing, prior to the input, a unique identifier for each set of seed, wherein the set comprises a plurality of seed (col. 15, lines 40+); (b) conveying each set of seed, segregated from other sets of seed, from the input to the output (col. 16, lines 26+), (c) automatically performing one or more operations on each set of seed while tracking and maintaining segregation of each set of seed, wherein the tracking comprises monitoring of one or more of the set consisting of the state of conveying, time and one or more operations relative to each set of seed (abstract); (d) automatically accumulating at the output an end product plurality of seed from the set of seed after performing one or more operations and storing information about the end product correlated to the identifier so that identity and progression of each set is known and commingling of seed from different sets of seed is avoided (col. 22, lines 45+). The language “without reference to a container or a physical location in a coordinate system” and “not by position of a conveying mechanism or container relative to a

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predetermined coordinate system, but by which of said one or more operations have been performed” is not given patentable weight as the language is indefinite and irreconcilable with the disclosed invention.

6. With regards to claim 2, the reference further discloses segregating the set of seed from a second set of seed (col. 15, lines 14+).

7. With regards to claim 3, the reference further discloses a plurality of sets of previously harvested seeds, each provided with a unique identifier, automatically performing said one or more operations while tracking and segregating each set of seed from each other (col. 15, lines 35+).

8. With regards to claim 4, the reference further discloses monitoring said operations for conditions indicative of an error (col. 14, lines 60+).

9. With regards to claim 5, the reference further discloses the conditions indicative of an error comprise one or more of (a) over capacity, (b) possibility of commingling of sets of seed, (c) improper operation; (d) lack of validation against a data set; (e) improper set of seeds relative to operational set-up (col. 14, lines 60+).

10. With regards to claim 6, the reference further discloses regulating movement of a set of seed to deter reaching over-capacity for any operation (col. 14, lines 60+).

11. With regards to claim 7, the reference further discloses progression of a said set of seeds through said one or more operations is controlled while maintaining segregation of the set of seeds (col. 15, lines 35+).

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12. With regards to claim 8, the reference further discloses control of progression comprises maintaining spatial separation of each set of seeds operating on the seeds and allowing recovery of each set of seeds while preserving its identity from other sets of seeds (col. 15, lines 35+).

13. With regards to claim 9, the reference further discloses conveying said set of seed to an outlet wherein said tracking provides information used to verify which set of seed is at the outlet (col. 15, lines 35+).

14. With regards to claim 10, the reference further discloses conveying said set of seed to and through said one or more operations, said tracking providing information to verify the location of the set of seed between input and output (col. 15, lines 35+).

15. With regards to claim 11, the reference further discloses the tracking comprising tracking the state of the operations relative the set of seeds (col. 14, lines 60+).

16. With regards to claim 12, the reference further discloses the state of the operations includes monitoring status of devices that control conveyance of the set of seeds (col. 14, lines 60+).

17. With regards to claim 13, the reference further discloses the sets of seed are seed samples (abstract)

18. With regards to claim 14, the reference further discloses the seed samples are related to a plant breeding program (col. 22, lines 45+).

19. With regards to claim 17, the reference further discloses the operations comprise one or more of (a) separating a set of seed from a carrier or adhering vegetation, tissues or structure, (b) cleaning, (c) discriminating between seeds in the set of seeds, (d) counting, (e) measuring

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moisture content, (f) measuring weight, (g) evaluating non-destructively, (h) measuring temperature (col. 22, lines 45+).

20. With regards to claim 18, the reference further inherently discloses directing said end product into a container.

21. With regards to claim 20, the reference further discloses generating a label for the set of seed or subset thereof based at least in part on information from the data set (col. 15, lines 40+).

22. With regards to claim 23, the reference further discloses generating a notification for transmission to a remote location related to accumulated data regarding the set of seed and communicating the notification (col. 16, lines 26+).

23. With regards to claim 26, the reference further discloses the operations are programmable dependent upon selected parameters (col. 21, lines 12+).

24. Claims 1-5, 7, 10, 12 – 14, 17-19, 21-23 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Keller et al. The reference discloses (a) providing, prior to the input, a unique identifier for each set of seed, wherein the set comprises a plurality of seed (col. 5, lines 16+); (b) conveying each set of seed, segregated from other sets of seed, from the input to the output, (c) automatically performing one or more operations on each set of seed while tracking and maintaining segregation of each set of seed, wherein the tracking comprises monitoring of one or ore of the set consisting of the state of conveying, time and one or more operations relative to each set of seed; (c) automatically accumulating at the output an end product plurality of seed from the set of seed after performing one or more operations and storing information about the end product correlated to the identifier so that identity and progression of each set is known and commingling of seed from different sets of seed is avoided (abstract). The language

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“without reference to a container or a physical location in a coordinate system” and “not by position of a conveying mechanism or container relative to a predetermined coordinate system, but by which of said one or more operations have been performed” is not given patentable weight as the language is indefinite and irreconcilable with the disclosed invention.

25. With regards to claim 2, the reference further discloses segregating the set of seed from a second set of seed (abstract).

26. With regards to claim 3, the reference further discloses a plurality of sets of previously harvested seeds, each provided with a unique identifier, automatically performing said one or more operations while tracking and segregating each set of seed from each other (col. 5, lines 35+).

27. With regards to claim 4, the reference further inherently discloses monitoring said operations for conditions indicative of an error (col. 6, lines 50+).

28. With regards to claim 5, the reference further discloses the conditions indicative of an error comprise one or more of (a) over capacity, (b) possibility of commingling of sets of seed, (c) improper operation; (d) lack of validation against a data set; (e) improper set of seeds relative to operational set-up (col. 6, lines 50+).

29. With regards to claim 7, the reference further discloses progression of a said set of seeds through said one or more operations is controlled while maintaining segregation of the set of seeds (col. 8, lines 12+).

30. With regards to claim 10, the reference further discloses conveying said set of seed to and through said one or more operations, said tracking providing information to verify the location of the set of seed between input and output (col. 8, lines 12+).

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31. With regards to claim 12, the reference further discloses the state of the operations includes monitoring status of devices that control conveyance of the set of seeds (col. 8, lines 12+).

32. With regards to claim 13, the reference further discloses the sets of seed are seed samples (abstract).

33. With regards to claim 14, the reference further discloses the seed samples are related to a plant breeding program (col. 1. lines 20+).

34. With regards to claim 17, the reference further discloses the operations comprise one or more of (a) separating a set of seed from a carrier or adhering vegetation, tissues or structure, (b) cleaning, (c) discriminating between seeds in the set of seeds, (d) counting, (e) measuring moisture content, (f) measuring weight, (g) evaluating non-destructively, (h) measuring temperature (abstract).

35. With regards to claim 18, the reference further discloses directing said end product into a container (abstract).

36. With regards to claim 19, the reference further discloses said data set comprises a data base, a spreadsheet, or a mapped memory (col. 9, lines 35+).

37. With regards to claim 21, the reference further discloses the operations are self-cleaning (col. 14, lines 21+).

38. With regards to claim 22, the reference further discloses the operations include a cleaning/size sorting operation which is self-cleaning (col. 14, lines 21+).

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39. With regards to claim 23, the reference further discloses generating a notification for transmission to a remote location related to accumulated data regarding the set of seed and communicating the notification (col. 10, lines 1+).

With regards to claim 26, the reference further discloses the operations are programmable dependent upon selected parameters (col. 10, lines 1+).

40. Claims 1-3, 7, 10 15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Peebles. The reference discloses (a) providing, prior to the input, a unique identifier for each set of seed, wherein the set comprises a plurality of seed (page 1, lines 75+); (b) conveying each set of seed, segregated from other sets of seed, from the input to the output, (c) automatically performing one or more operations on each set of seed while tracking and maintaining segregation of each set of seed, wherein the tracking comprises monitoring of one or ore of the set consisting of the state of conveying, time and one or more operations relative to each set of seed (page 1, lines 90+); (c) automatically accumulating at the output an end product plurality of seed from the set of seed after performing one or more operations and storing information about the end product correlated to the identifier so that identity and progression of each set is known and commingling of seed from different sets of seed is avoided (page 1, lines 90+). The language “without reference to a container or a physical location in a coordinate system” and “not by position of a conveying mechanism or container relative to a predetermined coordinate system, but by which of said one or more operations have been performed” is not given patentable weight as the language is indefinite and irreconcilable with the disclosed invention.

41. With regards to claim 2, the reference further discloses segregating the set of seed from a second set of seed (page 2, lines 15+).

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42. With regards to claim 3, the reference further discloses a plurality of sets of previously harvested seeds, each provided with a unique identifier, automatically performing said one or more operations while tracking and segregating each set of seed from each other (page 1, lines 90+; page 2, lines 15+).

43. With regards to claim 7, the reference further discloses progression of a said set of seeds through said one or more operations is controlled while maintaining segregation of the set of seeds (page 2, lines 15+).

44. With regards to claim 10, the reference further discloses conveying said set of seed to and through said one or more operations, said tracking providing information to verify the location of the set of seed between input and output (page 2, lines 15+).

45. With regards to claim 15, the reference further discloses the plant breeding program is a corn breeding program (page 1, lines 100+).

46. With regards to claim 17, the reference further discloses the operations comprise one or more of (a) separating a set of seed from a carrier or adhering vegetation, tissues or structure, (b) cleaning, (c) discriminating between seeds in the set of seeds, (d) counting, (e) measuring moisture content, (f) measuring weight, (g) evaluating non-destructively, (h) measuring temperature (page 2, lines 23+).

Claim Rejections - 35 USC § 103

47. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

48. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhide et al. The reference fails to explicitly disclose either a corn or soybean breeding program. At the time of the invention, it would have been obvious to one of ordinary skill in the art that the disclosed method is applicable to a variety of breeding programs (col. 14, lines 5+).

49. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al. The reference fails to explicitly disclose either a corn or soybean breeding program. At the time of the invention, it would have been obvious to one of ordinary skill in the art that the disclosed method is applicable to a variety of breeding programs (col. 8, lines 12+).

50. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peeples. The reference fails to explicitly disclose a soybean breeding program. At the time of the invention, it would have been obvious to one of ordinary skill in the art that the disclosed method is applicable to a variety of breeding programs (page 1, lines 100+).

Response to Arguments

51. Applicant's arguments filed 12/30/05 have been fully considered but they are not persuasive. Applicant's contends that the references cited utilize a coordinate system, whereas Applicant does not. As stated above, a coordinate system is inherently present when measuring movement from one position to another. Applicant further attempts to distinguish the present invention from Bhide et al., contending that Bhide et al. does not perform operations on the seed itself, but is directed to growing plants. Examiner contends, however, that operations are performed on the seed itself—scanning to determine presence of the seed.

Conclusion

52. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

53. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan R. Miller whose telephone number is (571) 272-6940. The examiner can normally be reached on M-F: 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy A. Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jrm

Kathy Matecki
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